



Historical project background

The database "**Chromosome numbers of the Flora of Germany**" has been designed as an online archive for chromosome counts and flow cytometric ploidy estimates of fern and seed plants of Germany. It contains data obtained from plants collected within the German borders (as of 1990). The data comprise literature references, voucher specimens and collection localities. Particular emphasis was made on georeferencing the locality data.

The database integrates earlier listings (see below) but also compiles information from recent publications and „grey“ literature such as theses, reports etc.

The first consolidated source of chromosome counts for our region is [Georg Tischler's](#) „Die Chromosomenzahlen der Gefäßpflanzen Mitteleuropas“ published in 1950. This compilation contains 1887 references giving chromosome counts of native and introduced vascular plants occurring within Germany (borders of Deutsches Reich 1871–1919). However, the plant specimens analysed stem from the whole distribution area of the particular species. Our analysis of 80% of the references revealed that only 6% of the references contain data which can be ascribed to the area of present-day Germany (and hence is relevant for our project). The remaining 20% were not screened due to difficulties in reference availability and presumably missing relevance.

The numbers given by Tischler (1950) were considered in many publications e.g. the widely used German field floras „Rothmaler“ (Jäger & Werner 2005) and „Oberdorfer“ (2001). The second milestone, the listing „Chromosomenzahlen der Farn- und Blütenpflanzen Deutschlands“ by [Focke Albers](#) & [Wilfried Bennert](#) (1998) relies on Tischler (1950) but also cites newer publications and includes their own chromosome counts. This list was also evaluated in the scope of our project and relevant data were included in the database.

In 2000 a database karIS (Karyological Information System) was developed and from 2001 to 2006 it was online as [KaryoDat](#) (Karyological Database) (Vaske & Albers 2000). Its information content (chromosome counts, DNA content, chromosome measurements, karyotypes, karyograms, herbarium vouchers, literature references and locality data incl. their cartographic representation) partly matches our approach. We are grateful to Focke Albers and Ulrich Meve for providing us with a pre-version of this database which was also analysed for our project.

Albers, F., Bennert, W. (1998): Chromosomenzahlen der Farn- und Blütenpflanzen Deutschlands. In: Wisskirchen, R., Haeupler, H.: Standardliste der Farn- und Blütenpflanzen Deutschlands, p. 562-616, Stuttgart (Hohenheim): Eugen Ulmer.

Jäger, E.J., Werner, K. (2005): Rothmaler, W. (Begr.) Exkursionsflora von Deutschland, Band 4 Gefäßpflanzen: Kritischer Band. 10. Auflage, München-Stuttgart: Elsevier-Spektrum.

Oberdorfer, E. (2001): Pflanzensoziologische Exkursionsflora für Deutschland und angrenzende Gebiete. 8. Auflage, Stuttgart (Hohenheim): Eugen Ulmer.

Tischler, G. (1950): Die Chromosomenzahlen der Gefäßpflanzen Mitteleuropas. 's-Gravenhage: W. Junk.

Vaske, J., Albers, F. (2000): karIS (karyological information system). TDWG 2000: Digitising Biological Collections. Taxonomic Databases Working Group, 16th Annual Meeting Senckenberg Museum, Frankfurt, Germany, November 10-12, 2000, abstract.